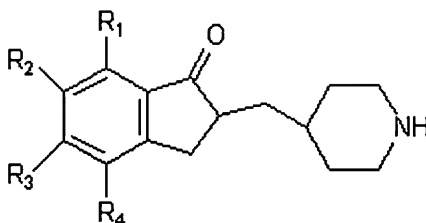


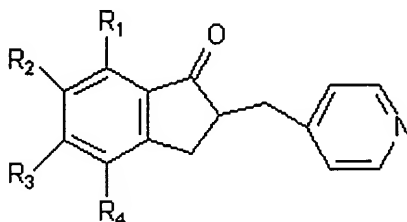
1. (Original) A process for the preparation of 2-(4-piperidiny) methyl-1-indanone of formula II, or a salt thereof,



**Formula II**

wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are identical or different, and represent hydrogen, straight or branched -chain alkyl, alkoxy, alkoxycarbonyl, alkyl- or dialkyl-aminocarbonyloxy, trifluoromethyl, or halogen,

the process comprising reducing 2-(4-pyridyl) methyl-1-indanone of formula III, or a salt thereof,



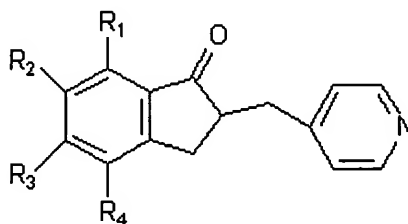
**Formula III**

wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are as defined above; and recovering the 2-(4-piperidiny) methyl-1-indanone of formula II.

2. (Original) The process of claim 1, wherein  $R^1$  and  $R^4$  represent hydrogen and  $R^2$  and  $R^3$  represent methoxy in formula II and formula III.

3. (Original) The process of claim 1, wherein the reduction comprises hydrogenation in the presence of a catalyst.

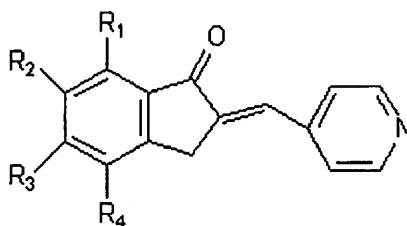
- 1 4. (Original) The process of claim 3, wherein the catalyst comprises one or more of  
2 platinum oxide, ruthenium oxide, and rhodium/carbon.
- 1 5. (Original) The process of claim 3, wherein the hydrogenation is carried out at a  
2 pressure of from about 1 to about 2 atmospheres using hydrogen gas.
- 1 6. (Original) The process of claim 3, wherein the hydrogenation is carried out at a  
2 temperature of from about 10°C to about 35°C.
- 1 7. (Original) The process of claim 3, wherein the hydrogenation is carried out in a  
2 solvent.
- 1 8. (Original) The process of claim 7, wherein the solvent comprises one or more of  
2 ethers, alcohols, chlorinated hydrocarbons, esters, ketones, hydrocarbons, polar aprotic  
3 solvents, water and mixtures thereof.
- 1 9.-15. (Cancelled).
- 2 16. (Original) The process of claim 1, wherein the recovering comprises one or more  
3 of distillation, distillation under vacuum, filtration, filtration under vacuum, decantation, and  
4 centrifugation.
- 1 17. (Original) A process for the preparation of 2-(4-pyridyl) methyl-1-indanone of  
2 formula III, or a salt thereof,



3  
4 **Formula III**

- 5 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are identical or different, and represent hydrogen, straight or  
6 branched -chain alkyl, alkoxy, alkoxycarbonyl, alkyl- or dialkyl-aminocarbonyloxy,  
7 trifluoromethyl, or halogen,

8 the process comprising selectively reducing 2-(4-pyridyl) methylene-1-indanone of formula  
 9 IV, or a salt thereof,



10  
 11 **Formula IV**

12 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are as defined above; and recovering the 2-(4-pyridyl) methyl-1-  
 13 indanone of formula III.

1 18. (Original) The process of claim 17, wherein R<sup>1</sup> and R<sup>4</sup> represent hydrogen and R<sup>2</sup>  
 2 and R<sup>3</sup> represent methoxy in formula III and formula IV.

1 19. (Original) The process of claim 17, wherein the reduction comprises  
 2 hydrogenation in the presence of a catalyst.

1 20. (Original) The process of claim 17, wherein the catalyst comprises one or more of  
 2 palladium/carbon, platinum/carbon and Raney nickel.

1 21. (Original) The process of claim 17, wherein the hydrogenation is carried out at a  
 2 temperature of from about 10°C to about 35°C.

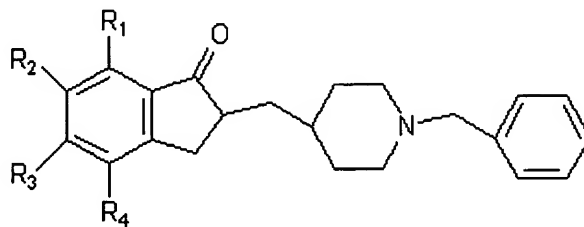
1 22. (Original) The process of claim 17, wherein the hydrogenation is carried out in a  
 2 solvent.

1 23. (Original) The process of claim 22, wherein the solvent comprises one or more of  
 2 ethers, alcohols, chlorinated hydrocarbons, esters, ketones, hydrocarbons, polar aprotic  
 3 solvents, water, and mixtures thereof.

1 24.-30. (Cancelled).

31. (Original) The process of claim 17, wherein the recovering comprises one or more of distillation, distillation under vacuum, filtration, filtration under vacuum, decantation, and centrifugation.

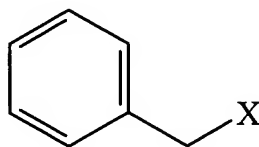
32. (Original) A process for the preparation of benzyl-piperidylmethyl-indanones of formula I, or a salt thereof,



**Formula I**

wherein  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are identical or different, and represent hydrogen, straight or branched -chain alkyl, alkoxy, alkoxycarbonyl, alkyl- or dialkyl-aminocarbonyloxy, trifluoromethyl, or halogen,

the process comprising reacting 2-(4-piperidyl) methyl-1-indanone of the formula II, or a salt thereof, prepared by the process of claim 1, with a benzyl derivative of formula V,



**Formula V**

wherein X is a leaving group; and recovering the benzyl-piperidylmethyl-indanones of formula I.

33. (Original) The process of claim 32, wherein the leaving group X in the benzyl derivative of formula V is chloride, bromide, iodide, tosylate, or sulphate.

34. (Original) The process of claim 32, wherein the reaction is carried out in the presence of a base and a phase transfer catalyst.

1 35. (Original) The process of claim 34, wherein the base comprises one or more of an  
2 amine, an inorganic base and ammonia.

1 36. (Original) The process of claim 35, wherein the inorganic base is an alkali metal  
2 carbonate.

1 37. (Original) The process of claim 36, wherein the alkali metal carbonate comprises  
2 one or more of lithium carbonate, potassium carbonate and sodium carbonate.

1 38. (Original) The process of claim 34, wherein the phase transfer catalyst is  
2 comprises one or more of quaternary ammonium salt, or quaternary phosphonium salt.

1 39. (Original) The process of claim 38, wherein the quaternary ammonium salt  
2 comprises one or more of tetramethylammonium iodide, tetrabutylammonium iodide,  
3 tetramethyl-2-butylammonium chloride, trimethylcyclopropylammonium chloride,  
4 tetrabutylammonium bromide, and t-butylethyldimethylammonium bromide.

1 40. (Original) The process of claim 32, wherein the reaction is carried out at a  
2 temperature of from about 0°C to about 40°C.

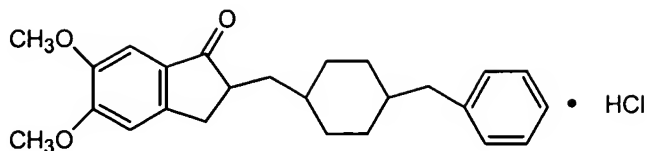
1 41. (Original) The process of claim 32, wherein the reaction is carried out in a  
2 solvent.

1 42. (Original) The process of claim 41, wherein the solvent comprises one or more of  
2 ethers, alcohols, chlorinated hydrocarbons, esters, ketones, hydrocarbons, polar aprotic  
3 solvents, water and mixtures thereof.

1 43.-49. (Cancelled).

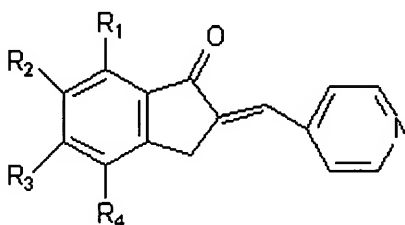
1 50. (Currently Amended) The process of claim 32, wherein the recovering  
2 comprises one or more of distillation, distillation under vacuum, filtration, filtration under  
3 vacuum, decantation, and centrifugation.

1 51. (Currently Amended) A process for the preparation of donepezil of formula VI  
2 or a pharmaceutically acceptable salt thereof,

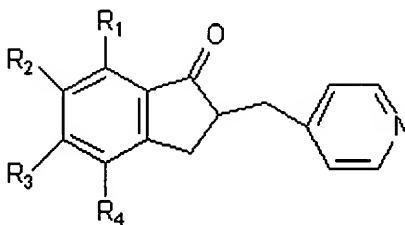
**Formula VI**

the process comprising:

(a) selectively reducing 2-(4-pyridyl) methylene-1-indanone of formula IV, or a salt thereof,

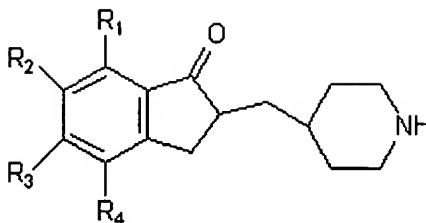
**Formula IV**

to obtain 2-(4-pyridyl) methyl-1-indanone of formula III,

**Formula III**

wherein  $R^1$  and  $R^4$  represent hydrogen and  $R^2$  and  $R^3$  represent methoxy in formula III and formula IV,

(b) reducing the 2-(4-pyridyl) methyl-1-indanone of formula III to obtain 2-(4-piperidinyl) methyl-1-indanone of formula II,

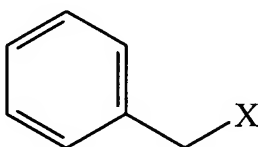


**Formula II**

wherein  $R^1$  and  $R^4$  represent hydrogen and  $R^2$  and  $R^3$  represent methoxy,

(c) reacting the 2-(4-piperidinyl) methyl-1-indanone of formula II,

with a benzyl derivative of formula V,



**Formula V**

wherein X is a leaving group, in the presence of an inorganic base and a phase transfer catalyst, and

(d) recovering the donepezil or a pharmaceutically acceptable salt thereof.

52. (Currently Amended) The process of claim 51, wherein the leaving group X in the benzyl derivative of formula V is chloride, bromide, iodide, tosylate, or sulphate.

53. (Currently Amended) A pharmaceutical composition comprising a therapeutically effective amount of donepezil or a pharmaceutically acceptable salt thereof obtained by the process of claim 51; and one or more pharmaceutically acceptable carriers, excipients or diluents.